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Special Interviews with NASA's Victor Lebacqz And ATCA Area Director Carl McCullough
FAA OEP: Continuing the Campaign for Capacity
With CAP, Capacity Can Come From the Ground Up
Germany's Advanced Training System
Using Window Film to Reduce Heat For ATC
Introducing Special Viewpoint Columns from FAA, ALPA and AOPA

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ATCA was formed in 1956 as a non-profit, professional membership association. Today, it represents the interests of all professionals in the air traffic control industry. Dedicated to the advancement of professionalism and technology of air traffic control, ATCA has grown to represent several thousand individuals and organizations managing and providing ATC services and equipment around the world.

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Gisele Mohler
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Continuing the Campaign for Capacity

Evolving the FAA Operational Evolution Plan—FAA's Keystone to Capacity

For the past several years the FAA has rolled out semi-annual updates of the Operational Evolution Plan (OEP) for review by aviation community leaders at OEP Industry Days. This past February was the first such meeting since the realignment of the OEP with the FAA's year-old Air Traffic Organization (ATO).

Executives and senior managers of RTCA member organizations and the FAA recently met at MITRE Center for Advanced Aviation System Development in McLean for OEP Industry Day. Their objectives were to renew dialogue on the plan; review the realignment of the OEP that now reflects the new ATO; describe the linkage to the FAA Flight Plan and the Next Generation Air Transportation System Integrated Plan coordinated by the Joint Planning and Development Office (JPDO); review the initiatives and changes in the OEP scheduled for this year; and begin to identify areas that need further discussion by RTCA committees.

Aviation Community Priorities Presented thru RTCA

- Area Navigation and Performance Based Navigation
  - More commitments (procedures and routes)
  - Separate solution set to focus on Terminal routes
- Time Based Metering
  - Separate solution set for focus
  - More sites implemented
- Surface Traffic Management
  - Being actively pursued in the rings
- Continued airspace redesign, URET, collaborative decision making
  - Being continued . . .

Since attendance at the Industry Day meeting was limited to approximately 250, we offer ATCA Journal readers a review of the reinvigorated OEP.

OEP OBJECTIVES

Improving capacity is a national imperative as many of the nation's airports are again facing significant crowding and delays. The FAA has committed to enhancing capacity approximately 30 percent over a ten-year period. That is being accomplished through the Operational Evolution Plan (OEP).

Public concern about national airspace system (NAS) congestion reemerged over the past year, especially when delay problems at Chicago O'Hare affected the system. The FAA administrator testified several times during the year to Congress about the agency's efforts to reduce congestion and increase capacity.

Through the Operational Evolution Plan, the FAA and major aviation community stakeholders decide the necessary steps for enhancing effective capacity. They col-

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Gisele Mohler, a five-year veteran of the agency with previous assignments in the arrival/departure (terminal) area of air traffic systems development, was named Manager of the Federal Aviation Administration's Operational Evolution Plan in March 2004. In her current position she manages the integration of capacity-related programs across many organizations and provides oversight to an operationally-oriented implementation plan for the National Airspace System to manage and reduce delays at the 35 largest and most congested airports. She earned her BA from the University of Maryland, has a Masters of Science in Business Administration from Johns Hopkins University, and has undertaken Executive Development training at the Wharton School of Business, University of Pennsylvania.

Arthur Humphries is a public affairs and marketing communications professional working on the Operational Evolution Planning staff at the FAA. He's been supporting the agency since late 1997 starting with Air Traffic Systems Development where he helped roll out the Display System Replacement and Host Computer System Replacement at the nation's ARTCCs. He then helped organize the Office of Runway Safety and is credited with recruiting actor Harrison Ford to serve as the agency's celebrity spokesman to turn around the growing rate of runway incursions. Humphries is a former Navy Commander, a surface warfare officer, and served as chief public affairs officer for the US Navy in Europe, as lead staff communications counsel to the Joint Chiefs Staff at the Pentagon, and directed the nationwide Navy Recruiting Command public relations program.

www.faa.gov/programs/oep

laborate on commitments to programs, systems and procedures that deliver desired, measurable results. That collaboration, and steps taken to get through to a program decision, is part of a process that has helped drive the popularity of the OEP. It has credibility across the aviation community and on Capitol Hill.

The OEP process includes regular meetings at both FAA executive and working levels and formal, semi-annual forums with aviation community leaders such as the recent Industry Day. There are also regular, smaller aviation community interactions to build and maintain relationships.

More of a process than a plan, the OEP delivers what it is designed to do—increase the effective capacity[1] and efficiency of the NAS over a rolling 10-year period by approximately 30 percent from what it was in CY2000. It is specific to *effective* capacity, because it's not enough just to provide more capacity; any additional capacity has to make a positive difference in the right places.

The OEP focus is the nation's 35 most congested airports. Those airports have come to be known as the OEP-35 (*see sidebar list*). That target list of airports may increase over time, especially as metro-areas overtake hubs, or as congestion grows at other airports.

In order to achieve effectiveness, FAA and OEP partners look beyond additional concrete as a solitary solution. They look to other means and methods to satisfy additional capacity requirements, e.g. cooperative air traffic management and airborne technologies and procedures that align to solve certain capacity problems. The leadership of the aviation community, working though RTCA, has given FAA their priorities for pursuing capacity enhancements and those have been factored in the Version 7 of the OEP.

Looking beyond the OEP's 10-year horizon to 2025 and beyond, the FAA is working internally across domains and externally with other agencies through the Joint Planning and Development Office (JPDO) on the multi-agency Next Generation Air Transportation System (NGATS) Integrated National Plan.

Through the JPDO the FAA is developing new models for aviation stakeholders to work together to transform the system and achieve the goals identified in the NGATS plan. These will require agencies and program offices under them to adopt innovative ways to coordinate across agencies and lines of business. This will create better government practices for leveraging knowledge and resources.

The result for the FAA is a much tighter integration of plans and activities with greater overlap than when the agencies were pursuing similar activities separately. For the FAA the integration reaches from all of the service units of the Air Traffic Organization (ATO) to the Office of Aviation Safety and others.

The FAA has also provided other surety in the integration of its plans by having designated Charlie Keegan the JPDO director and an FAA senior executive, with dual responsibility as the ATO Vice President for Operations Planning. Not by happenstance that executive is also responsible for the Operational Evolution Plan.

At the forefront of the Integrated National Plan's goals for the future air transportation system is the goal of increased capacity. It is a superset of OEP activities.

In the near future, all activities related to the nation's air transportation system will need to be integrated and aligned to major strategies being executed by joint government and industry Integrated Product Teams (IPTs). That is to say, each element of modernization must contribute to the overall NGATS architecture and roadmap. The Integrated National Plan will not be an entity unto itself competing against other initiatives for funding; rather, it will be the primary focus of efforts, energy and talent.

JPDO IPT activities are underway and will reach into existing agency programs for linkage to NGATS. This means that OEP activities, as well as other initiatives across the FAA, will be captured in IPT strategies and in the overall JPDO roadmap for 2025.

NEW OEP STRUCTURE

The new version of OEP looks different than previous editions.

The design was enhanced to account for lessons learned, and a need to identify hard commitments and better criteria.

Though the content has not significantly changed, the quadrants and solution sets have been refined in order to better align OEP activities with the activities of the new ATO so that they are integrated instead of independent.

The newly designed OEP also focuses on the importance of airports and FAA regions. An entire focus area or quadrant has been designated for airport congestion. It is co-managed by FAA directorates for Airports and Regions and Center.

What ***does not*** change in the OEP are existing goals of increasing effective capacity by 30 percent at 35 designated airports, and existing principles of commitment and accountability.

TRANSITION RINGS

In addition to the quadrants which represent core commitments, there are two new elements to the OEP called transition rings. The rings contain activities without hard commitment dates. They include promising capacity-enhancing initiatives covering prototype and pilot projects such as surface traffic management systems and datalink, and safety/policy/procedures/airspace initiatives such as wake turbulence research and development and required navigation procedures future approach applications. As is the case with OEP core programs, ring initiatives have been included if they meet certain criteria specially designed to determine what moves in or out of the rings. If they are successful they matriculate into the core quadrants of the OEP; otherwise they will be moved out of the plan.

Prototype & Pilot Projects ring includes projects and improvements not mature enough for a stable implementation date. The transition manager of this ring also

[1] Effective Capacity is defined as the amount of traffic that may be handled at a fixed level of delay. The fixed level of delay selected for the purposes of the OEP Capacity Growth Chart is 14 minutes per flight, based on the average that existed when the OEP started.

Transition Rings	Related OEP Core Quadrant	Initiatives
Prototypes & Pilots	En Route Congestion	Problem Analysis Resolution & Ranking (PARR)
	En Route Congestion	Data link
	Flow Efficiency	Surface Traffic Management System (STMS)
	Flow Efficiency	Collaborative Decision Making Initiatives
	Flow Efficiency	Wx Projects—CIWS
	Flow Efficiency	System-Wide Information Management (SWIM)
	Terminal Congestion	Traffic Management Advisor—Multi-Center (TMA-MC)
	Terminal Congestion	Controller Display of Traffic Information (CDTI) Assisted Visual Separation (CAVS)
Policy	Terminal Congestion	RNP SAAAR (special aircraft and aircrew authorization required) (Future approach applications)
	Terminal Congestion	Wake Turbulence Research And Development Effort To Enhance Operations For Closely Spaced Parallel Runways (CSPR)
	Terminal Congestion	Terminal Airspace Redesign
	En Route Congestion	EnRoute Airspace Redesign

Summary of Changes in ATO Context

- Portfolio management to align with ATO Business Plan
- Clearer accountability and communication with aviation community
- Clearer distinction between research activities and promised benefits implementation
- Clearer management of the transition of projects into the OEP
- Alignment with ATO planning processes

directs Air Traffic Organization Operations Planning Technology Development. Projects pending analysis for safety and feasibility are placed in the **Safety, Policy, Procedures, and Airspace** ring. The transition manager for this ring is also the FAA Flight Standards Service manager of the Flight Technologies and Procedures Division.

When the FAA rolled out the OEP in 2001 it was noted that the plan only included initiatives the FAA believed were attainable within the time period of the plan. The FAA also said that the new plan "is flexible to accommodate new ideas." The agency had the foresight then to accommodate change and new thinking. The Deputy FAA administrator said at the time, "As new ideas become implementable . . . we will incorporate these ideas into the plan as well . . . It will not look the same as it does today."

The transition rings do just what was imagined when the plan was introduced—developing new, effective capacity enhancers. The rings design presents a clearer distinction between prototype activities and the promised benefits of implementation, and better manages the transition of projects into the core of the OEP.

The OEP is holding course with its baseline principles:

- **Increase capacity** where congestion is or will be, while maintaining safety
- **Commitment** to implement credible initiatives
- Cross-agency **integrated timetable** coordinated with Aviation Community
- Informed executive **decisions**
- **Communication** with Aviation Community
- **Accountability** for providing cross-agency, integrated, congestion-reducing benefits

OEP CORE CONTENTS

The core quadrants of the OEP are named for capacity problems areas. They align with key FAA lines of business—Terminal Area Congestion Quadrant (ATO Terminal Services), ATM Flow Efficiency Quadrant (ATO System Operations Services), En Route Congestion Quadrant (En Route and Oceanic Services), and Airport Congestion Quadrant (FAA Airports and Regions & Center Directorates).

Technical teams develop "smart sheets" including key activities, decisions and milestones, for solutions in each of four objective areas or quadrants. A senior FAA executive is assigned to each solution. That person serves as the single Primary Office of Delivery (POD), accountable along with a cross-agency support team for the delivery of products and services detailed in each smart sheet.

A small staff oversees the implementation of the OEP, managing the inter-dependencies of the solutions sets and coordination with the aviation community.

(*Solution sets within each quadrant*):

Solution Set	Programs
Airport Congestion-1: New and Extended Runways	Cleveland; MSP; CVG; STL; ATL; BOS; CLT; Seattle
En Route Congestion-1: User Preferred Routing	User Request Evaluation Tool
En Route Congestion-2: Reduced Oceanic Separation	Oceanic 30-30
En Route Congestion-3: Reduced Vertical Separation	Domestic Reduced Vertical Separation Minima
En Route Congestion-4: Reduced Voice Communications	*(Data Link is in the Rings) Data Link is a key agency program but because its implementation schedule has yet to be resolved it is not included in the core.*
En Route Congestion-5: En Route Airspace Redesign	Airspace: ZBW AAIP; MACE; ZTL; ZDC; Bay/Basin; NoCal; ZBW Mod; Hi Alt; Atlantic; GOMEX; ZME; ZHU; Alaska; ZDV Ski; So Fla; ZMA-MIA; ZLC
Flow Efficiency-1: Improved Weather Information	Collaborative Convective Forecast Product
Flow Efficiency-2: Improved Traffic Flow Collaboration	GAAP; Distance Based GDP; NAT Random Route Trials; FCA enhance; CDR enhance; ESTMP; Improved Ops Plan; Data Quality Report Card; Process Improvements
Flow Efficiency-3: Fill Gaps in Arrival Streams	Traffic Management Advisor
Terminal Congestion-1: Fill Gaps in Arrival Streams	Time-based Metering
Terminal Congestion-2: Terminal Airspace Redesign	Airspace: NY/NJ/PHL; Chicago; ATL; SoCal; NoCal; BCT; Bethel; Houston I90; MSP; CVG; LAS; Interior Alaska; Cent Cal; Omaha; HNL; North Utah
Terminal Congestion-3: New Arrival/Departure Routes	RNAV Routes (30 per year)
Terminal Congestion-4: New Approaches (including RNP)	RNP; RPAT; LNAV/VNAV; SIAPS; LPV; SOIA STL; PRM ATL
Terminal Congestion-5: Separation Standard Reductions	Wake based separation reduction
Terminal Congestion-6: Improved Terminal Weather Information	Integrated Terminal Weather System

ACCOMPLISHMENTS

Let's consider some highlights of what was accomplished just this past year:

New and extended runways. The biggest bang in effective capacity comes through new runways supported by reconfigured airspace and new technology. The 35 airports included in the OEP account for 73 percent of all passenger enplanements. Much of the delay to air traffic can be traced to inadequate throughput (measured as arrival and departure rates) at these airports. The construction of new runways is the most effective method of increasing throughput.

Two new runways were added in Fiscal Year 2004: Houston in October of 2003 and Orlando in December of 2003. The new Houston runway provides the potential to increase local capacity by 35 percent during optimal visibility, 37 percent during marginal visibility, and 22 percent during Instrument Flight Rules (IFR) conditions. The new Orlando runway provides the potential to increase that airport's capacity by 35 percent during optimal visibility, 47 percent during marginal visibility, and 42 percent during IFR conditions. In the summer, a new crossing runway procedure was implemented at Chicago that increases arrivals by about 10 per hour in certain meteorological conditions.

In the en route domain, three more URET Conflict Probe sites became operational. The sites are Ft. Worth (in November 2003), Minneapolis (in December 2003), and Denver (in February 2004). The tool allows conflicts to be addressed in a strategic sense rather than a tactical sense, with less deviation to aircraft trajectories and less stress on controller workload. In the oceanic domain in the fall of 2003, airspace changes to the Oakland oceanic gateway structure are allowing aircraft faster access to more efficient routes and altitudes.

A number of flow improvements were completed in 2004. New Flow Constrained Area (FCA) procedures were implemented in March, and the use of these procedures was expanded. These procedures better allow flow managers to identify specific aircraft adversely affected by a situation so that a better tailored response can be implemented. In addition, the Create Reroute Tool (CRT) was enhanced for ease of use for generating flight lists for each reroute advisory, so that flow managers can specifically determine who is affected by a reroute advisory. Increased use has been made of Coded Departure Routes (CDRs) for implementation of standard playbook plays, which allows a reroute amendment to be entered more quickly. Preliminary analysis shows that the combined use of FCA/FEA, use of the CRT, and CDRs has led to a 33 percent reduction in coordination time to implement reroute advisories.

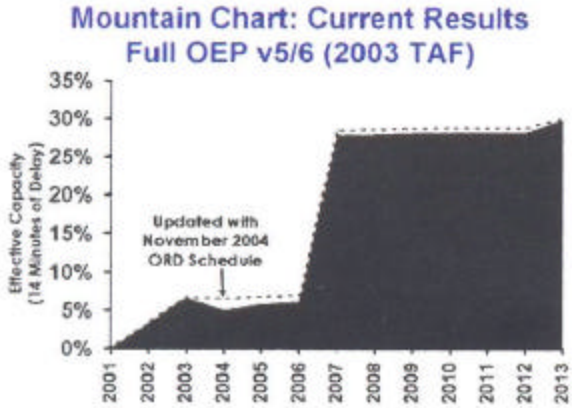
Three Integrated Terminal Weather Systems (ITWS) sites were implemented in FY2004 and are providing better weather information for both controllers and flow managers, and enabling more efficient flow plans to be implemented. The ITWS sites are Boston, Denver, and Minneapolis and all were operational by late summer. Enhancements to the Collaborative Convective Forecast Product (CCFP) were implemented in the spring, aiding increased understanding of how future weather will affect the National Airspace System.

Accomplishments by two OEP initiatives were partially achieved and continue to be worked—Initial Wide

Area Augmentation System (WAAS) Lateral Performance/Vertical (LPV) Approaches, and Enhanced Visual Approaches. LPV Approaches allow near Category I approach minima to be flown without Instrument Landing System (ILS) infrastructure, and the promised number of LPV approaches were implemented. However, certified production avionics were not available as of the end of FY04; such avionics are expected imminently. The FAA is working with the aviation community to identify appropriate locations for additional LPV approaches to foster the use of avionics necessary to fly LPV approaches. An Enhanced Visual Approach trial was completed at Louisville Airport. Research continues on this capability to increase landing capacity in conditions during other than VMC.

OVERALL CAPACITY RESULTS AND EXPECTATIONS

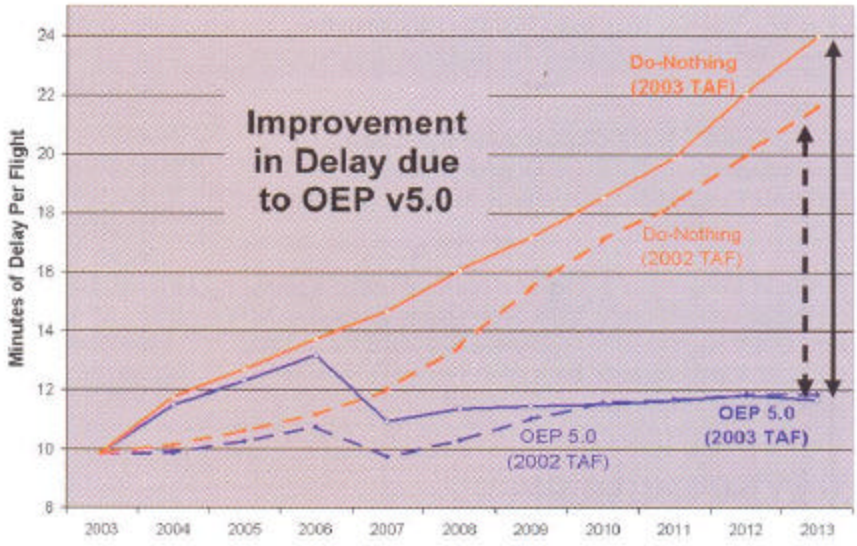
The OEP Capacity Growth Chart *(see graphic)* depicts the amount of "Effective Capacity" provided by the NAS, based on the cumulative modeled capacity gains from OEP solutions. The fixed level of delay selected for the purposes of the OEP Capacity Growth Chart is 14 minutes per flight, based on the average that existed when the OEP started.



Although modeling of OEP Version 7 is being pursued, results in OEP Versions 5 and 6 already show a large increase in effective capacity when FY2006 commitments are accomplished. This increase in effective capacity is due to the implementation of five new runways (most notably Atlanta), together with the enabling procedures, technologies, and airspace redesign initiatives.

What has changed since Version 6 is the new Terminal Area Forecast (TAF) which has increased projected demand at some significantly congested airports. Higher growths at some high delay airports has led to a decrease in effective capacity in fiscal year 2004. This decrease is expected given the high delays seen at some heavily delayed airports in the past year. Recent schedule changes have served to alleviate some of those delays as is depicted by the dashed line in the chart. Higher than expected growth at IAD in fiscal year 2004 reduces the effective capacity gains expected in fiscal year 2007, but the runway planned for IAD in OEP version 6 would be expected to provide greater benefits in fiscal year 2009 than was previously modeled.

The total delay chart *(shown here)* reflects the overall effect on delay reduction that OEP has, both according to the new TAF forecast and the old TAF forecast. The delay reduction of OEP commitments is substantial. Note that the difference in the TAF forecast has a significant effect in 2005 and 2006, but in the longer run there is no difference. This is due to OEP commitments expected to keep pace with forecasted demand overall. Of course, capacity in some localities will not keep pace with demand and in those cases delays will get worse over time, as not all localities have improvements planned.



BUDGET REALITIES

The reality of the funding process and local community decision-making are critical factors in the OEP process. Portions of OEP have been delayed or re-scoped due to budget cuts or complications, e.g., environmental review processes that were extended. Some initiatives have been removed from OEP Version 7. The new runway at Dulles has been taken out of the plan, though it certainly may be added to the next version. Some of the less significant airspace projects have also been taken out of the OEP core due to funding limitations. The status of Local Area Augmentation System (LAAS) is also under review while program managers develop a means for insuring required integrity.

Nevertheless, the OEP has flourished and has well earned a strong reputation it enjoys across the community and on Capitol Hill. Its reputation is upheld in its accomplishments. Beginning in the year 2000 and

through fiscal year 2003, the aviation community has benefited significantly from the improvements laid out in the OEP.

YEARS OF ACCOMPLISHMENTS—SUMMARY OF OEP's SUCCESS

The OEP has increased arrival and departure rates. OEP initiatives have improved flight during unfavorable airport weather conditions. Thanks to the OEP we've decreased en route congestion, and we've improved flight during severe en route weather conditions. Details of those accomplishments are available at www.faa.gov/programs/oep.

Beginning in the year 2000 and through fiscal year 2003, the aviation community benefited from the following operational improvements in the OEP:

INCREASED ARRIVAL AND DEPARTURE RATES

- New runways were commissioned at the Philadelphia, Phoenix, Detroit, Denver, Miami, and Cleveland airports
- All choke point actions were completed
- The Traffic Management Advisor became operational at eight Air Route Traffic Control Centers (ARTCCs)
- Time Based Metering became operational at seven ARTCCs
- More than three dozen new and overlay Area Navigation (RNAV) routes were implemented
- Las Vegas was implemented the four corner post airspace redesign plan

IMPROVED FLIGHT DURING UNFAVORABLE AIRPORT WEATHER CONDITIONS

- Precision Runway Monitor (PRM) was installed at Minneapolis-St. Paul and Philadelphia airports
- The first five production units of the Integrated Terminal Weather System (ITWS) became operational
- Runway Visual Range data began to be provided to users via Collaborative Decision Making Network and became available from more than 49 airports
- The first seven Wide Area Augmentation System (WAAS)-enabled (Lateral Performance and Vertical) LPV approaches were published
- 553 Standard Instrument Approach Procedures (SIAP) were published

DECREASED EN ROUTE CONGESTION

- All choke point actions were completed
- The User Request Evaluation Tool (URET) Conflict Probe was installed at 14 centers and became operational in 10 ARTCCs
- The Controller Pilot Data Link Communications (CPDLC) concept was proved with the Build 1 tool tested at Miami ARTCC
- More Web-based collaborative tools and better quality data were made available for managing congestion
- New software that identifies flights affected by Playbook plays were implemented
- Gulf of Mexico RNAV routes were implemented
- Anchorage Oceanic airspace was redesigned
- High Altitude Phase 1 initial implementation began. Waypoints around Special Use Airspace (SUA) and a SUA information Web site were implemented. Q-routes for Global Positioning System (GPS)-equipped aircraft were made available along the West Coast and for Canadian re-routes. Non-Restrictive Routing (NRR) was turned on in the seven northwest ARTCCs

IMPROVED FLIGHT DURING SEVERE EN ROUTE WEATHER CONDITIONS

- Ground delay programs were executed with improved compliance
- The Collaborative Convective Forecast Product (CCFP) extended range forecast of thunderstorms was made available on the Air Traffic Control System Command Center Web site
- The Playbook was expanded by increasing options to 119 plans
- Weather radar data was made available on en route controller radar displays
- Flow Evaluation Areas (FEA)/Flow Constrained Areas (FCA) Collaborative Routing Coordination Tools prototype functions were implemented on the Enhanced Traffic Management System (ETMS) and upgraded further
- Virginia Capes (VACAPES) agreement was reached between FAA and the military on use of East Coast warning area airspace during hazardous weather avoidance
- Slot Credit Substitution was implemented
- The convective forecast was made available to the Collaborative Decision Making (CDM) community on the ETMS

In summary, these initiatives have increased the capacity and efficiency of the NAS and continue to provide direct benefit to FAA's customers—the people and organizations that pay to use the national airspace system. Many represent initial installments of a longer-term program. It's a tremendous legacy. In fact the OEP has been so successful the FAA's chief operating officer Russ Chew has also specifically referred to it as a vital ATO umbrella plan.

Secretary Mineta said, "The key to keeping up with demand is to plan ahead." That is what we're doing throughout FAA. Starting with the FAA Flight Plan and the Operational Evolution Plan, then the Next Generation Air Transportation System Integrated Plan, we have a unique opportunity to build on our successes. By transforming our aviation system, we can ensure another century of growth and prosperity.

DOT Goal Area—Mobility

On-time arrival rate at 35 OEP airports

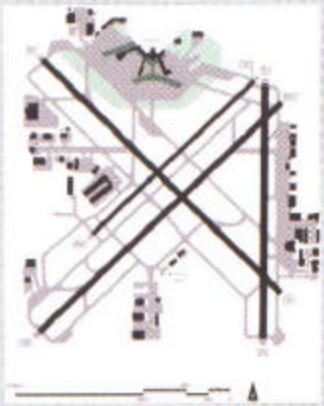
Airport daily arrival capacity

Airport arrival efficiency rate

When the airlines' demand overwhelmed the capacity of the National Airspace System in the summer of 2000, the Federal Aviation Administration responded to the crisis with a business-planning model based on a shared commitment.

The commitment meant that the government and the aviation industry would better align each other's varied resources to improve systems and processes leading to gains in effective airspace capacity. That commitment became the Operational Evolution Plan (OEP).

Is the OEP still alive and working? Has it evolved? Does it fit in the new Air Traffic Organization, the ATO? In a word, yes. But for those who want to know the rest of the story, here it is:



The OEP started as a business planning activity that accelerated during the summer delays and cancellations of August 2000 that were primarily due to dramatic increases in the number of people flying and particularly bad weather that summer. An FAA plan to address capacity and delay issues, developed in concert with the aviation community, was put in place in Spring 2001. FAA executives had also begun meeting in late 2000 to discuss a broader strategy to address capacity issues and to continue to get input from the aviation community.

Technical teams developed "smart sheets" including key activities, decisions and milestones, for solutions in each of four objective areas—En Route Congestion, En Route Weather, Terminal Congestion, and Terminal Weather. A senior FAA executive was assigned then and continues to serve as the single Point of Delivery (POD), accountable along with a cross-agency support team for the delivery of products and services detailed in each smart sheet.

To oversee the implementation of the OEP, to manage the inter-dependencies of the solutions sets and to coordinate with the aviation community, the FAA established the Operational Evolution Staff in late Spring 2001.

With the August 2000 airline delays and cancellations fresh in aviation leaders' minds, and fresh input from the aviation community through RTCA, the first edition of the OEP was released in the Spring of 2001. The OEP was and remains organized around four issues or objective areas. For organizational purposes the agency has adjusted those four areas or quadrants. The contents or initiatives in the OEP haven't changed in the process; they're just better organized, and clearly aligned with the new ATO and its structure.

The solution sets for the objectives have always included new runways, innovative technology, and advanced operational procedures. But there hadn't been an organized approach to considering prototypes and pilot programs. Now there is with transition rings surrounding the revised quadrants.

To accommodate the return of aviation demand, despite the severe economic challenges facing the aviation industry after September 11, 2001, the FAA remains committed to the capacity enhancements presented in the OEP and is accelerating the process in alignment with the FAA's customer-focused Air Traffic Organization.

Leadership/Management Structure

The structure put in place within the FAA to coordinate the OEP is:

An Executive Team of cross-agency senior FAA executives, as well as representatives from DoD, NASA, and air traffic unions;

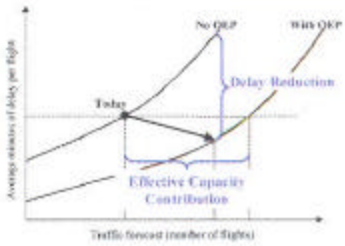
Technical teams that develop and implement "solution sets" including key activities, decisions and milestones;

A senior FAA executive assigned to each smart sheet, responsible for results and serving as the single Point of Delivery (POD), accountable along with a cross-agency support team for the delivery of products and services detailed in the solution set; and

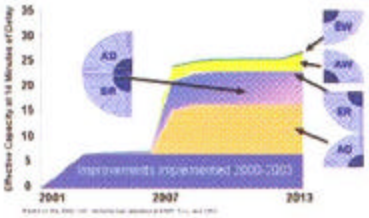
A small OEP staff that supports the overall effort.

The problems, the solutions, the expected results, and those realized thus far are maintained on the OEP web site at faa.gov/programs/oep. The site presents a clear picture of the multiple and measurable means pursued by the agency with aviation community leadership to achieve specific performance improvements in our National Airspace System.

Measurement: The OEP includes macro and micro-level measurements aligned with the FAA's new Air Traffic Organization and its customer focus. At the macro level, measures are used to evaluate the effectiveness of capacity and efficiency improvements reflected in OEP programs.



Performance metrics are designed to focus on actual operational improvements. Metrics include customer-based outcomes such as accessibility (capacity and throughput), efficiency, predictability, flexibility, and safety. Operational metrics focus on capacity, throughput, and efficiency.



OEP's Value: The OEP is bringing real and substantial benefits. Working together, by the beginning of the 2004 the aviation community had achieved an effective capacity increase of more than 6%—double the plan. That measurement shown in the OEP Version 6 chart here, is taken since the plan's inception, and is attributable to OEP activities and industry changes; schedule depeaking, for instance.

Results: The OEP's objective is to add capacity enhancements that will accommodate an approximate 30 percent increase in airspace user demand over the 10-year period. The metric is effective capacity, which is defined as the amount of traffic that may be handled at a fixed level of delay. The fixed level of delay selected for the purposes of OEP Capacity Growth is 14 minutes per flight, based on the average that existed when the OEP started in 2001. The Transportation Department defines a delay as any flight that arrives more than 14 minutes past its scheduled arrival time.

Example—Effect of new runways; we are gaining more arrivals per hour. Detroit Metro's new runway is a huge success and exemplary of how we get things done together, and achieve 25% capacity locally from a new runway. Thru 2010, OEP runways are projected to provide a 12+% gain, and with other actions such as Required Navigation Performance providing 18+%, we expect to realize a total gain in capacity to be able to handle a 30% growth in demand (by 2010). Now, we are seeking more benefits more quickly.

OEP's Customers

Aviation industry, primarily via RTCA and other similar associations (the customer alphabet groups). We maintain routine, direct communications with some 600 industry centers of influence, as well as with 100 airline Operations Chiefs who represent FAA's top customers.

The ATO lines of business. We also work with FAA employee unions to gain buy-in on key projects.

Congress and oversight bodies such as OMB, GAO, and the DOT OIG. We communicate with our owners via one-on-one discussions, status reports, formal meetings, and formal replies.

The media, especially aviation trade publications and transportation reporters. The OEP team seeks out opportunities for editorial round-tables and other avenues for facilitating a continuing dialogue on capacity and efficiency issues.

The research community, with whom we work in conjunction with NASA and FAA's REDAC Committee.